CLAIMS

1. Tool (1) for surfacing an optical surface (2), which tool comprises a rigid support (4) having a transverse end surface (13), an elastically compressible interface (5) that is pressed against and covers said end surface (13), and a flexible buffer (6) adapted to be pressed against the optical surface (2) and which is pressed against and covers at least part of the interface (5) on the side opposite to and in line with said end surface (13), characterized in that the buffer has a central portion (6a) that is in line with said end surface (13) and a peripheral portion (14) that is transversely beyond said end surface (13) and return spring means are provided (15) for joining this peripheral portion (14) to the support (4) which means comprise a flat or curved leaf-spring (18) fixed rigidly, on the inside, to the support (4) and having a continuous peripheral portion (22) cooperating with said peripheral portion (14) of said buffer (6) by bearing thereon, directly or through the intermediary of the single interface (5), means for stabilizing the tool during surfacing being formed by said return means (15) and by said peripheral portion (14) of the buffer (6), said tool being adapted to perform surfacing essentially in said central portion (6a) of said buffer (6).

2. Tool according to claim 1, characterized in that said leaf-spring (18) is flexible and projects transversely from the support (4).

3. Tool according to claim 2, characterized in that said leaf-spring is formed by a solid wall.

4. Tool according to claim 2, characterized in that said leaf-spring (18) is formed by an apertured wall.

5. Tool according to claim 4, characterized in that said leaf-spring (18) is apertured by windows (21) of generally trapezoidal shape.

6. Tool according to claim 5, characterized in that two consecutive windows (21) are separated by a strip of material with parallel edges.

7. Tool according to either claim 5 or claim 6, characterized in that the boundary between each window (21) and said continuous peripheral portion (22) is of circular arc shape.

8. Tool according to any one of claims 1 to 7, characterized in that said leaf-spring (18) is part of a wafer further including a solid portion (19) that said leaf-spring surrounds.

9. Tool according to claim 8, characterized in that said solid portion (19) is circular.

10. Tool according to either claim 8 or claim 9, characterized in that said solid portion has holes (23) through which the shank of a fixing screw is passed.

11. Tool according to any of claims 1 to 10, characterized in that the interface (5) has a central portion (5a) that is in line with said end surface (13) and a peripheral portion (16) that is transversely beyond said end surface (13) and is between the peripheral portion (14) of the buffer (6) and the peripheral portion (22) of the leaf-spring (18) of the return means (15).

12. Tool according to claim 11, characterized in that the peripheral portion (16) of the interface (5) when unstressed assumes the shape of a ring around the central portion (5a) of the interface (5).

13. Tool according to claim 11 or claim 12, characterized in that the interface (5) is of one-piece construction and its central portion (5a) and peripheral portion (16) form a single component (5).

14. Tool according to claim 13, characterized in that when unstressed the interface (5) assumes the shape of a disk.

15. Tool according to any of claims 1 to 14,

characterized in that the buffer (6) is of one-piece construction, the central portion (6a) and peripheral portion (14) forming a single component (6).

16. Tool according to claim 15, characterized in that the buffer (6) comprises a plurality of petals (14b) projecting transversely from the central portion (6a).

17. Tool according to claim 15, characterized in that said peripheral portion (14) takes the form of a ring (14a) around the central portion (6a).

18. Tool according to claim 17, characterized in that the buffer (6) is of one-piece construction and when unstressed assumes the shape of a disk.

19. Tool according to any of claims 1 to 18, characterized in that the end surface (13) of the support (4) is plane.

20. Tool according to any of claims 1 to 18, characterized in that the end surface (13) of the support (4) is convex.

21. Tool according to any of claims 1 to 18, characterized in that the end surface (13) of the support (4) is concave.